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(54) **Dispensing carton**

(57) A carton in which a dispensing aperture (18) is pierced through the upper part of a side wall (13) is provided with a hood (19) retained on the top of the carton body (15) *e.g.* by interengaging flanges (17, 27) and movable between a closed position in

which it seals the aperture (18) and an open position in which it leaves the aperture free for dispensing the contents of the carton. The hood may be a separate member or it may be hinged to another side wall of the carton, *e.g.* as a "flip-top". A sealing pad 28 may be provided within the hood (19).

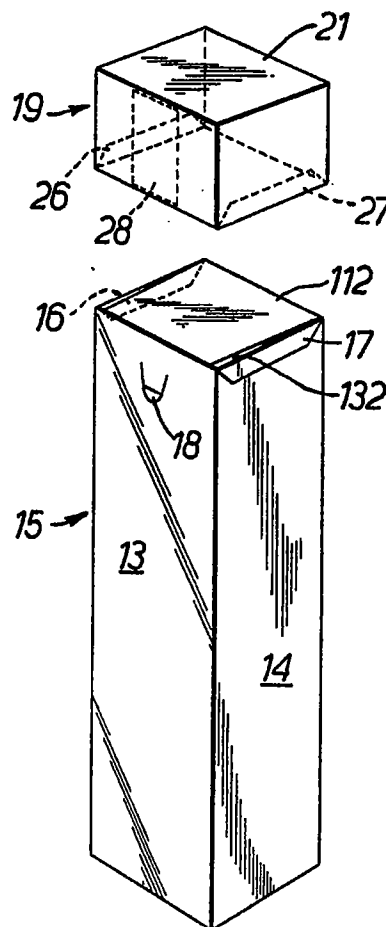


Fig. 1.

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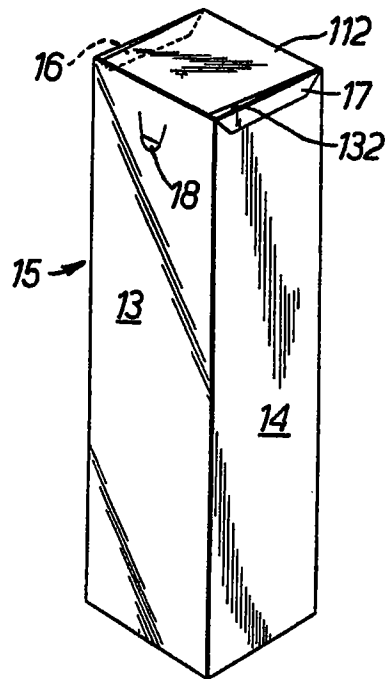
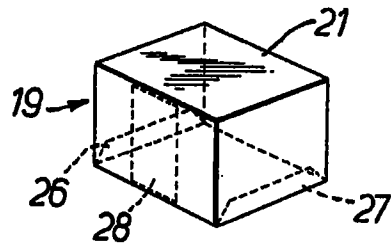


FIG. 1.

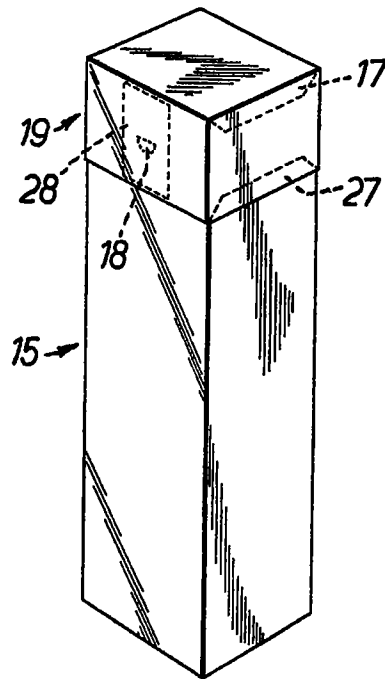


FIG. 2.

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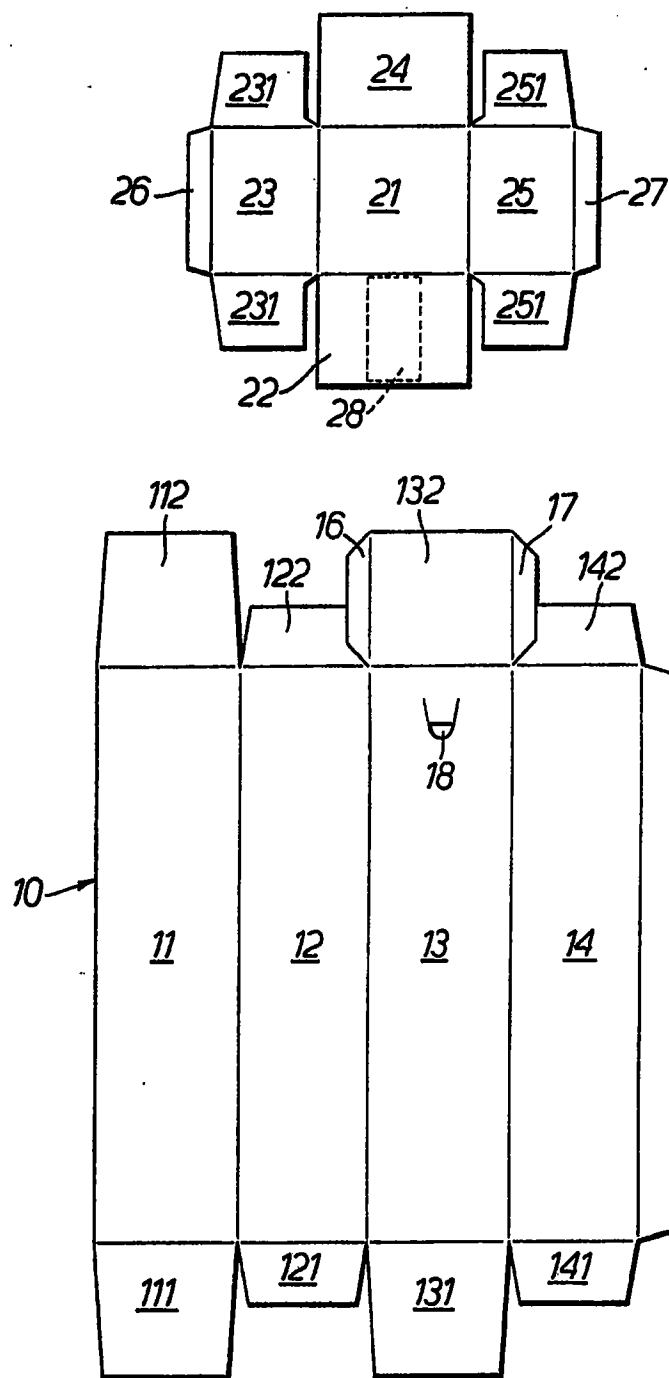


FIG. 3.

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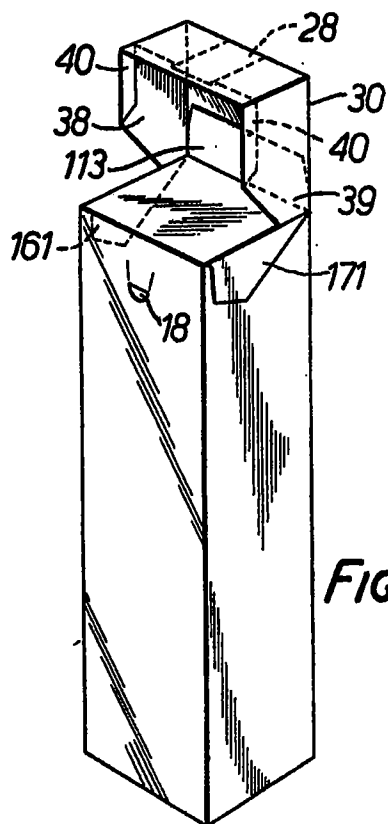


FIG. 4.

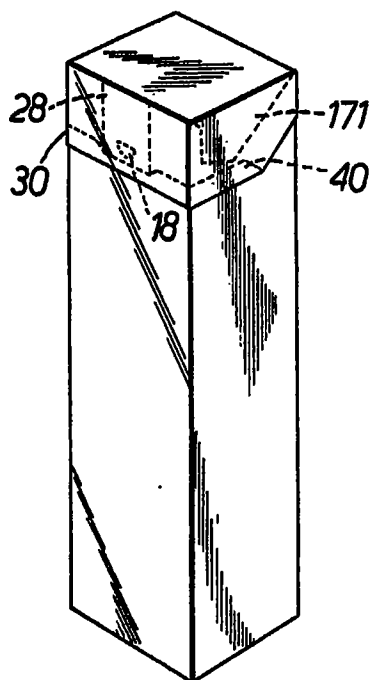


FIG. 5.

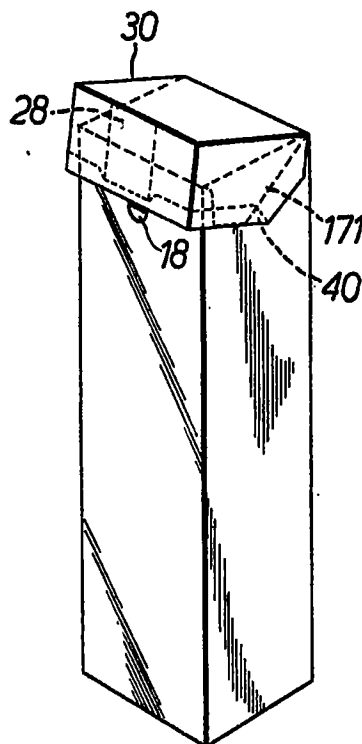


FIG. 6.

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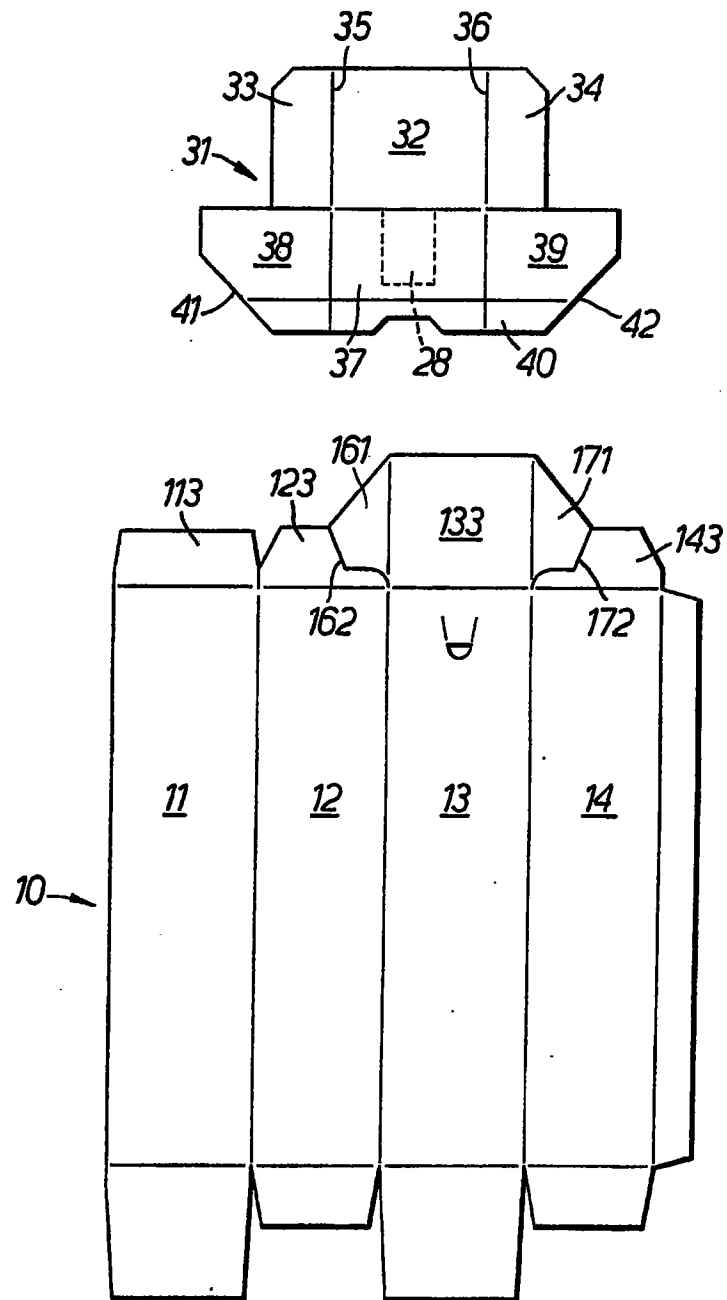


FIG. 7.

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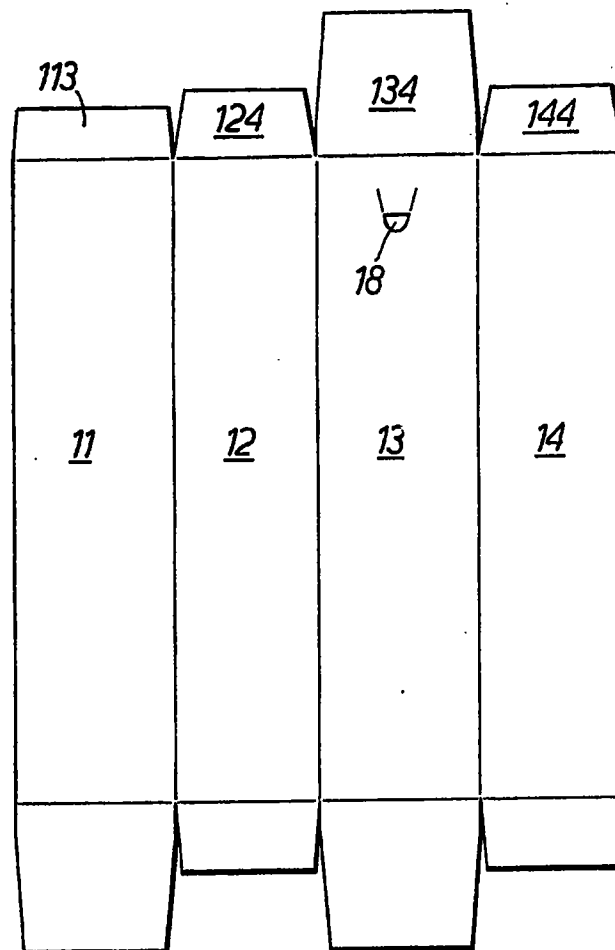
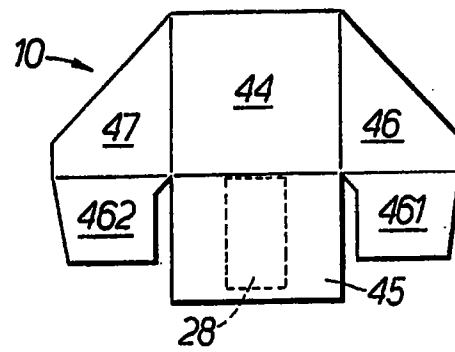


FIG. 8.

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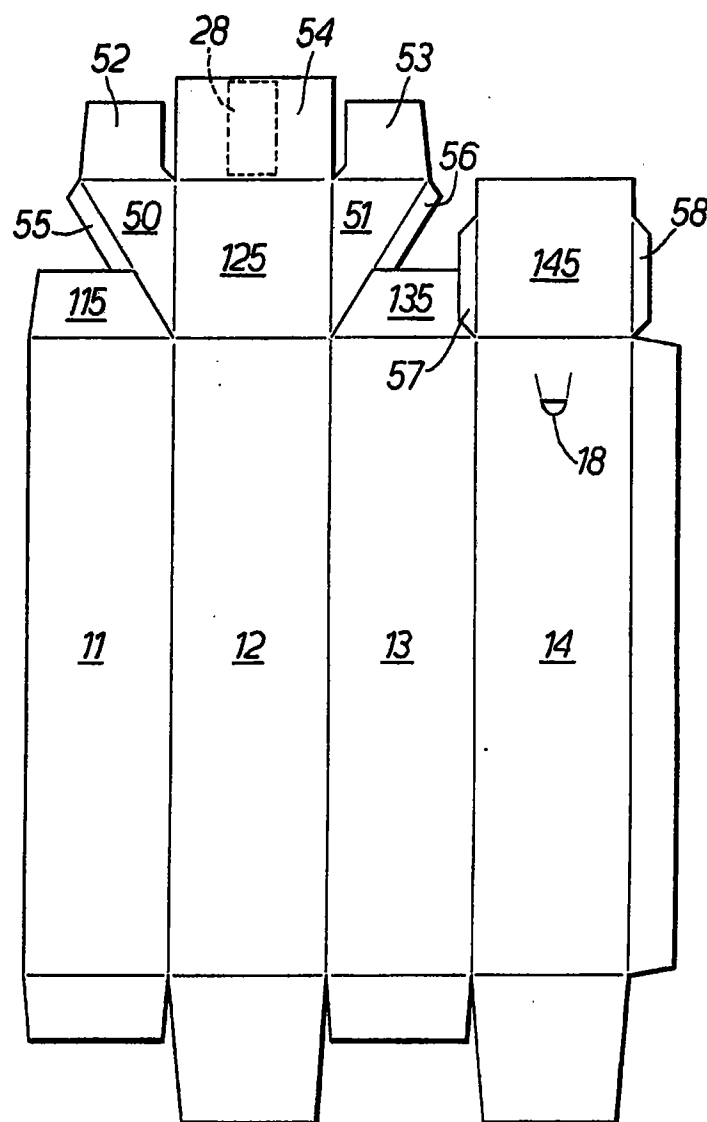


FIG. 9.

SPECIFICATION

Cartons

This invention relates to cartons and more specifically to cartons of the type which are intended to be pierced to produce a dispensing aperture through which the contents of the carton can be dispensed.

It is an object of the invention to provide cartons of this type, suitable for example for containing solids in particulate form, e.g. powders, or viscous liquids, in which the dispensing aperture can be conveniently re-closed by the user as often as may be desired after the initial piercing.

According to the invention, there is provided a carton having a body comprising a closed top and bottom joined by side walls, one of the side walls being piercable at an upper portion thereof to produce a dispensing aperture, wherein a hood is retained on the top of the carton body and is movable between a closed position in which it fits closely over the top and upper portions of the side walls so as to close the aperture (when it has been pierced) and an open position in which it leaves the aperture free for dispensing the contents of the carton.

Preferably the hood is provided internally with a pad of resilient material with a non-porous surface to seal over the aperture in the closed position. Preferably also the carton body is provided with a flexible internal sealed liner and the said one side wall is piercable at a formation which comprises a cut-out in the side wall through which the liner can be pierced. These provisions are particularly useful when the carton is used for fine powders or liquids but may be of lesser importance where the contents are in the form of large particles. In that case, the carton body may be unlined and a weakened line may be provided in the said one side wall which can be broken by finger pressure to pierce the aperture.

In one embodiment of the invention the hood is in the form of a box with side and top panels and an open end, having internal dimensions such that it can slide in telescopic fashion on the upper end of the carton body between its closed and open positions.

In an alternative embodiment, the hood comprises a front panel which in the closed position fits over the said upper portion of the said one side wall, two side panels and a top panel which is hinged to the top of the side wall of the carton body opposite to the said one side wall, thus providing a so-called "flip-top".

In either of the embodiments mentioned, it may be convenient to limit the movement of the hood into the open position by reverse folded flanges on the lower edges of side panels of the hood engaging downturned flanges extending from the top of the carton body.

In the case of the "flip-top", the reverse folded flanges may be formed on the lower edges of the side panels of the hood and continuous with a reverse folded flange on the lower edge of the

front panel. The top panel of the hood may be hinged to the side wall by being glued to a flap integrally connected to the side wall through a hinge line. Alternatively the carton body and hood may be formed from a single blank and integrally connected through a hinge line between the top panel of the hood and the side wall to which it is hinged.

Specific embodiments of the invention will now be described by way of example and with reference to the accompanying drawings, in which:—

Figure 1 is a perspective view of a container in accordance with the invention, with the hood ready to be fitted on to the body,

Figure 2 shows the container of Figure 1 in assembled condition,

Figure 3 is a plan view of blanks for the container and hood,

Figure 4 is a perspective view of a container in accordance with a second embodiment of the invention, having a "flip-top" type of hood, in the assembled condition but before closing of the hood,

Figure 5 is a similar view of the container of Figure 4 in the closed condition,

Figure 6 is another view of the container of Figure 4 with the hood in the restricted open position,

Figure 7 is a plan view of blanks for the container body and hood of the container of Figures 4 to 6,

Figure 8 shows a plan view of blanks for a similar container with a "flip-top" hood but without limitation of the open position of the hood, and

Figure 9 shows a one piece blank for a container body and hood of the "flip-top" type.

In each of the embodiments to be described, the container body is formed from a paperboard blank with an internal tubular liner of plastics material, in the manner described in our British Patent Specification No. 1,555,312.

In the embodiment of Figures 1 to 3, the blank 10 (Figure 3) comprises four sections 11, 12, 13 and 14 which form the side walls of the assembled container body 15. The bottom of the container body is made up by gluing flaps 111, 121, 131 and 141 together in conventional manner. The top end of the blank 10 also has flaps 112, 122, 132 and 142 on the ends of the respective sections 11, 12, 13 and 14, the flaps 122 and 142 being shorter than the flaps 112 and 132. Flap 132 is provided with side flanges 16 and 17 and the adjacent section 13 of the blank is formed with a small dispensing aperture 18. The liner (not shown) is attached to the inside of the blank 10, particularly around the aperture 18. In making up the top of the container body 15, the shorter flaps 122, 142 are bent inwards first and then the flap 132 is bent over and glued to them. Finally the longer flap 112 is bent over and glued to flap 132, thus leaving the flanges 16 and 17 projecting laterally from the container body as seen in Figure 1.

The hood 19 (Figures 1 and 2) is constructed from the blank 20 of Figure 3, having a top panel 21 and side panels 22, 23, 24, 25. Side panels 23 and 25 have lateral flanges 231 and 251 which are glued to the insides of panels 22 and 24 to erect the hood into the rectangular form seen in Figures 1 and 2. Panels 23 and 25 also have end flanges 26 and 27 which are reverse folded to lie inside the panels 23 and 25 as shown in Figure 1, before the hood 19 is fitted to the container body 15. The side panel 22 which is to fit over the dispensing aperture 18 is provided with a pad 28 of resilient material, *e.g.* a plastic foam, with a non-porous surface, in a position to cover the aperture 18 when the hood 19 is in position.

The internal dimensions of the hood 19 are such that it fits closely over the top of the container body 15 but with sufficient clearance to allow it to slide telescopically thereon. As the hood 19 is fitted over the top of the carton body 15, the flanges 26 and 27 snap over the flanges 16 and 17 but when the hood is raised to uncover the dispensing aperture 18, the flanges 26 and 27 will engage under the flanges 16 and 17 and thereby prevent removal of the hood 19 from the container body.

In use, the filled carton will be sold with the hood in its closed position.

The purchaser can open the carton by lifting the hood 19 as far as permitted by the flanges and piercing the liner (not shown) through the dispensing aperture 18. The contents can then be poured out of the aperture 18, which can be reclosed simply by depressing the hood 19 so that the pad 28 seals against it as shown in Figure 2.

The embodiment shown in Figures 4 to 7 differs in having a "flip-top" type of hood 30. The container body 15 is similar to that of Figures 1 to 3 except that the flaps 113, 123, 133 and 143 which make up the top of the carton body are of different shape, as most clearly seen in Figure 7. In particular, the flap 113 is shorter and the flap 133 is provided with extended side flanges 161 and 171 having straight edges 162, 172 at an acute angle to the length of the blank for the purpose described later.

The hood 30 is formed from the blank 31 shown in Figure 7, and comprises a top panel 32 with side flanges 33 and 34 integrally connected thereto through hinge lines 35, 36, a front panel 37 and side panels 38, 39. A flange 40 runs continuously along the edges of panels 37, 38 and 39. The sides of panels 38 and 39 are cut away at 45° at 41 and 42.

When the carton body is made up from the blank 10, the flap 133 is glued to the flaps 123 and 143 leaving the shaped flanges 161 and 171 extending laterally therefrom and the flap 113 is left standing upright. The hood 30 is assembled from the blank 31 by first reverse folding the flange 40 to lie against the inside of the panels 37, 38, 39 and then bending the blank and gluing the panels 38 and 39 to the flanges 33 and 34 respectively. A pad 28 similar to that of Figures 1 to 3 is then glued inside the front panel 37 and the

top panel 32 of the hood is glued to the upstanding flap 113 of the carton body, thus producing the carton in the form shown in Figure 4. On folding the hood 30 down into the closed position as shown in Figure 5, the portions of the intumed flange 40 on the side panels 38 and 39 of the hood snap past the flanges 161, 171 to allow the hood to reach the closed position, in which the pad 28 seals against the dispensing aperture 18 as before. On hinging the "flip-top" hood 30 upwards again, the sections of the flange 40 on the side panels 38 and 39 engage within the angled edges 162, 172 of the flanges 161, 171 to limit the opening movement of the hood as shown in Figure 6. In this position, however, the aperture 18 is exposed so that the user can pierce the liner (not shown) within the carton for dispensing the contents.

In the embodiment shown in Figure 8, the hood is of a similar "flip-top" type to that of Figures 4 to 7, but is formed from the blank 43 having a top panel 44, a front panel 45 and side panels 46 and 47 which are attached to the front panel by gluing flanges 461 and 462 thereto. The carton body 15 is formed from a blank 50 with unflanged top flaps 113 (to which the top panel 44 of the hood is glued) 124, 134 and 144. In this embodiment, there is no equivalent of the reverse folded flange 40 of Figures 4 to 7 so there is no limitation on the extent to which the hood can be opened.

Figure 9 illustrates a one-piece blank for making up a "flip-top" carton similar to that of Figures 4 to 7, but in which the top panel 125 of the hood is integrally connected with one of the side walls (12) through a hinge line instead of being glued to the hinged flap 113. The body part of the blank, including side wall sections 11, 12, 13, 14, is similar to the previously described embodiments. The top of the carton is made up by first bending inwards hinged flaps 115 and 135 and then bending over flap 145 and gluing it to them. The hood is then made up in a similar manner to that of Figure 8 by bending down side panels 50, 51 from top panel 125 and gluing flanges 52, 53 to the inside of front panel 54, after which the pad 28 is secured in position. When it is desired to restrict the opening of the hood as in Figures 4 to 7, small flanges 55, 56 are provided on the inclined edges of side panels 50, 51 and reverse-folded into the hood. On closing the hood for the first time, these flanges snap over laterally extending flanges 57, 58 on flap 145 which are bent down by the opening movement. If no restriction of the hood opening is desired, the flanges 55, 56, 57, 58 are omitted.

CLAIMS

1. A carton having a body comprising a closed top and bottom joined by side walls, one of the side walls being piercable at an upper portion thereof to produce a dispensing aperture, wherein a hood is retained on the top of the carton body and is movable between a closed position in which it fits closely over the top and upper portions of the side walls so as to close the

aperture (when it has been pierced) and an open position in which it leaves the aperture free for dispensing the contents of the carton.

2. A carton according to Claim 1, wherein the hood is provided internally with a pad of resilient material with a non-porous surface to seal over the aperture in the closed position.

3. A carton according to Claim 1 or 2 wherein the carton body is provided with a flexible internal sealed liner and the said one side wall is pierceable at a formation which comprises a cut-out in the side wall through which the liner can be pierced.

4. A carton according to Claim 1 or 2 wherein the carton body is unlined and the weakened line is provided on the said one side wall which can be broken by finger pressure to pierce the aperture.

5. A carton according to any one of the preceding claims wherein the hood is in the form of a box with side and top panels and an open end, having internal dimensions such that it can slide in telescopic fashion on the upper end of the carton body between its closed and open positions.

6. A carton according to any one of Claims 1 to 4, wherein the hood comprises a front panel which in the closed position fits over the said upper portion of the said one side wall, two side panels and a top panel which is hinged to the top of the side wall of the carton body opposite to the said one side wall.

7. A carton according to Claim 5 or 6 wherein the movement of the hood into the open position is limited by reverse folded flanges on the lower edges of side panels of the hood engaging downturned flanges extending from the top of the carton body.

8. A carton according to Claims 6 and 7 wherein the reverse folded flanges are formed on the lower edges of the side panels of the hood and continuous with a reverse folded flange on the lower edge of the front panel.

9. A carton according to Claim 7 or 8 wherein the top panel of the hood is hinged to the side wall by being glued to a flap integrally connected to the side wall through a hinge line.

New claims or amendments to claims filed on 13—7—81.

Superseded claims 1, 3, 4, and 6—9.

New or amended claims:—

1. A carton having a closed body comprising a top and bottom joined by side walls, one of the side walls having, at an upper portion thereof, a

formation by means of which it may be formed with a dispensing aperture, the carton including a hood which is retained on the top of the carton body and is movable between a closed position in which it fits closely over the top and upper portions of the side walls so as to close the aperture (when the aperture has been formed) and an open position in which it leaves the aperture free for dispensing the contents of the carton.

3. A carton according to Claim 1 or 2 wherein the carton body is provided with a flexible internal sealed liner and the formation comprises a cut-out in the said one side wall through which the liner can be pierced.

4. A carton according to Claim 1 or 2 wherein the carton body is unlined and the formation comprises a weakened line along which the said one side wall can be broken by finger pressure to form the aperture.

6. A carton according to any one of Claims 1 to 4, wherein the hood comprises a front panel which in the closed position fits over the said upper portion of the said one side wall, the hood further comprising two side panels and a top panel which is hinged to the top of the side wall of the carton body opposite to the said one side wall thereof.

7. A carton according to Claim 6 wherein the top panel of the hood is hinged to the said opposite side wall by being glued to a flap integrally connected to the said opposite side wall at a hinge line.

8. A carton according to Claim 6 wherein the carton body and hood are formed from a single blank and integrally connected through a hinge line between the top panel of the hood and the side wall to which it is hinged.

9. A carton according to any one of Claims 5 to 8 wherein the movement of the hood into the open position is limited by reverse folded flanges on the lower edges of side panels of the hood engaging behind downturned flanges extending from the top of the carton body.

10. A carton according to Claims 6 and 9 wherein the reverse folded flanges are formed on the lower edges of the side panels of the hood and continuous with a reverse folded flange on the lower edge of the front panel.

11. A carton having a body and a movable hood retained thereon, substantially as hereinbefore described with reference to Figures 1 to 3, or Figures 4 to 7, or Figure 8, or Figure 9 of the accompanying drawings.